AMB has built fulfillment space for Webvan to address the e-commerce demand. AMB is Webvan's preferred real estate advisor. Webvan is located in three of AMB's properties (Atlanta, Seattle, and Washington, D.C.). Webvan leases 991,598 square feet, which is 1.5% of total industrial GLA and contributes 1.6% of annualized industrial base rents. Webvan's buildings have few tenant improvements (are very generic), with the credit risk protection based upon the location and functionality of property. No special terms, credit enhancements, or agreements were structured with Webvan. In fact, AMB notes that Webvan has spent a significant amount of its own money fitting the buildings. If Webvan vacated, AMB does not believe a problem would exist in re-leasing the properties. Only three buildings are committed for Webvan by AMB at this juncture.

ProLogis is working with Amazon.com and Streamline.com, receiving development and build-to-service fees, to find locations. The key to a fulfillment center's location is its close proximity to transportion hubs. High through-put facilities are more effective when located near Federai Express, UPS, Airborne Express or another logistics company.

High through-put fulfillment centers are in high demand with ProLogis moving to offer tenants services such as supply-chain management systems, while AMB Properties is working to converge its real estate with technology services. Industrial channels are being re-engineered, and AMB and ProLogis are concentrating their efforts on B2B and B2C initiatives that offer tenants valuable services. Using real estate as the platform, different technology-enabled solutions are emerging to be offered to tenants of industrial buildings.

e-Services Range From Internet Incubator Funds To High-Tech Logistics Systems

AMB Property

David Fries is heading AMB's *e-Business Development Group*. According to the company, the e-business group will be focused on:

- Strategic partnering with real estate technology companies in areas such as e-procurement and e-leasing;
- Strategic partnering with non-real estate technology companies with a focus on enhancing the tenant experience;
- Forming horizontal and vertical alliances with other real estate companies with the intent of making real estate properties more efficient;
- Coordinating with members of AMB's Customer Alliance group (Steve Calloway, Leo Kuhnman) with respect to capitalizing on the needs of emerging companies, such as Webvan;
- Selective strategic venture capital investments (specifically those that will help the company do its business better/more efficiently such as PhatPipe.com, Webvan, Redenvelope.com, Brandfarm.com). AMB has invested less than $20 million;
- Managing existing (and new) venture capital investments;
- Coordinating closely with AMB's operations group (headed by Bruce Freedman) on various service offering opportunities that will be afforded

next year by RMA (e.g., telecom, power/utilities, racking systems, software).

Creating An Internet Fund Via Equity Investments

One area of recent focus for AMB is building its investments in real estate technology companies involved in the fulfillment process. AMB has set forth fairly specific criteria for technology investments: 1. increases AMB and/or tenant efficiency; 2. makes AMB's product more appealing to customers; and 3. enables AMB to enhance the value of the target company. Similar in concept to CMGI and ICG, AMB is investing in real estate technology companies, developing an Internet incubator fund for emerging technology firms.

Thus far, AMB's selective strategic venture capital investments include PhatPipe.com, Webvan, Redenvelope.com, and Brandfarm.com. As of 1Q 2000, the combined investment in these four start-ups represents less than $20 million.

Webvan
AMB Property has invested $5 million in Webvan.com, an online grocer. Webvan's share value is still above AMB's original cost basis (investment was made over a year ago). AMB has not sold any shares, and the majority of shares are subject to an issuer's lock-up period. Overall, the investment is not meaningful, but the company is not disclosing specifics. The investment is more meaningful in terms of the business relationship that exists.

PhatPipe.com
AMB was an early investor in PhatPipe.com, investing between $1 million and $5 million. The revenue-sharing agreement depends on the product offering and the level of revenues from the product. PhatPipe gives commercial real estate owners and tenants a pipeline to everything they need to cut costs and improve efficiency, such as communications networks, computer equipment, human resources consulting, long distance services, broadband access, power, insurance, office furniture, racking systems, etc. PhatPipe aggregates tenant demand, so it can negotiate lower prices to SMEs on virtually everything it sells. PhatPipe works with commercial real estate owners to meet the demand for floor space and cyberspace. All services are offered via an e-marketplace.

PhatPipe.com is working with Cisco Systems and Hewlett-Packard Co. to create a data communication backbone to support high-speed Internet access, video conferencing, remote office connectivity, voice-over IP telephony, to name a few. Virtual private networks (VPN) are also a service that is provided. Other equity investors include CenterPoint Property Trust and EastGroup Properties.

Brandfarm.com
Brandfarm.com is a New York-based specialty retailer start-up that may offer both online and bricks and mortar retailing. Brandfarm.com's mission is to develop and launch premier Internet service companies that redefine how business gets done. Similar to a business services company, Brandfarm.com

provides Internet-related services such as consulting, software development, and infrastructure to any company interested in establishing a Web presence. As a consumer-centric company, Brandfarm.com utilizes the Internet to deliver e-services that were previously unavailable in the marketplace. AMB is gaining knowledge from a start-up e-tailer what the front-end and back-end physical space demands are as virtual space grows.

Redenvelope.com
Redenvelope.com is an online specialty gift company, with rapid fulfillment services. Redenvelope is a gift ordering service that provides very high-end gifts for last-minute shoppers. AMB has a strategic relationship with Redenvelope.com.

ProLogis

ProLogis is actively involved in building a logistic software application to improve supply-chain management for its customers. ProLogis' objective is to offer a global distribution solution to its customers. With 1Q 2000's earnings report, ProLogis' management team drew attention to the fact that the company added new services and Web-enabled technologies that will allow it to provide complete solutions for its customers' distribution services needs. The company enhanced its Web site with the launch of ProLogis CustomerConnect(SM), the industry's first interactive customer account access system. ProLogis CustomerConnect offers customers the ability to track their entire portfolio of properties as well as providing a Web-based platform for other technology initiatives. In addition, ProLogis' temperature-controlled business announced it will use DeliveryNet from Descartes to integrate its North American and European internal information systems and to create a B2B food logistics network, allowing customers to track movement of goods and information throughout the supply chain.

The company also recently formed ProLogis Equipment Services (PES), a joint venture with Dana Commercial Credit Corporation, to provide material handling, equipment leasing and asset management services. Dana Commercial will be responsible for management of the assets and administration of the partnership. PES will be branded and marketed through ProLogis' Integrated Solutions Group and will offer a Web-based asset management system that will allow customers to manage and track their material handling equipment across their entire network.

In 1997, ProLogis made a 33% strategic investment in INSIGHT Management Support Systems. INSIGHT is a leading logistics provider of fully integrated optimization software for supply-chain management services. One-third of the world's largest corporations use INSIGHT's management support systems. Using the network optimization technology from INSIGHT, ProLogis offers logistics optimization consulting services which model supply chain and service-level solutions for its customers. Together, ProLogis and INSIGHT offer a full range of decision support software and modeling tools to determine the optimal location and operation of customers distribution facility network.

In addition to the above mentioned technology initiatives, ProLogis has established a group of individuals to focus 100% of their efforts on exploring opportunities to expand the company's technology-based services.

Summary

As evident, the industrial companies have been pursuing real estate technology strategies in fairly different and meaningful ways. AMB Properties, First Industrial and ProLogis are all actively involved in addressing dot.com companies' demands for fulfillment centers, but these management teams are cautious in leasing existing space to or developing new space for dot.com enterprises with no profits or track records. Typical agreements are structured whereby the landlord receives six months' rent, broker commissions and tenant improvement costs. AMB is building and locating fulfillment warehouses for Webvan. In terms of wiring properties for high-speed access, First Industrial is evaluating various broadband solutions for its portfolio of industrial facilities. On the e-service opportunities, both B2C and B2B investments are occurring. AMB has created an Internet incubator fund to invest in companies that provide insight into the front-end or back-end of the fulfillment process. Less than $20 million has been invested, but the value-added in understanding these start-ups' strategies is substantial. ProLogis has embarked on a different road, pursuing the B2B inefficiencies, specifically the supply-chain management systems, or the logistics involved in delivering products via just-in-time systems. In summary, convergence of real estate and technology is evident among these real estate owners as industrial space is being reshaped to meet the demands of an online and wired world.

Office REITs

The final sector we wish to discuss is the office sector, which actually led the industry in converging technology with real estate and unlocking the value for shareholders with Reckson Associates' spin-off of Frontline Capital in May 1998. FrontLine Capital was formed to become a provider of technology solutions for small and medium-sized enterprises.

The impetus for Reckson's creating this entity was the trend occurring throughout the sector—office space is being reconfigured as tenants demand more square footage for conference rooms and communal space. More and more tenants need conference room space for video conferencing and collaborative projects. Despite the growth in hoteling and telecommuting, the demand for office space has not diminished. On the contrary, as the economy continues to prosper, overall demand has remained healthy. The Technology Age and Knowledge Age are demanding new uses of office space. Collaborative workspaces that offer flexibility are in high demand.

In Table 9 (p. 99), the alliances formed between the broadband service providers and the real estate companies as well as the e-business initiatives that have been launched are listed. The financial arrangements are beginning to be disclosed, and as revenues begin to hit the income statements, we anticipate further disclosure.

Wired Office Buildings

Kicking off the wired real estate race were the office real estate companies, which clearly are experiencing intense demand from global and national tenants for high-speed broadband access. High-speed access is becoming more of a necessity, as only 3% of the office buildings with over 10,000 square feet are wired with broadband access. The revenue-generating potential for multi-tenant offices is substantial.

The broadband providers that wire "the last few inches" from the tenant, through the riser system in the office building, to the base station in the basement are referred to as business-centric local exchange carriers, or BLECs. These BLECs include Allied Riser Communications, Cypress Communications, OnSite Access, and Broadband Office. The BLECs partner with broadband service providers—DSL, wireless and fiber providers—to deliver services demanded by the tenants.

Access to buildings to wire the "last few inches" has become a controversial issue with some regulatory/legislative risks. Office REITs are very cognizant of the "access" risks and are forming non-exclusive arrangements with BLECs, and one consortium of office real estate companies was formed to challenge some of the BLECs.

Arrangements are also being negotiated with the broadband providers that connect the buildings wires to the backbone network. Companies such as Winstar Communciations, Teligent and NEXTLINK connect the wired building to the Internet via wireless. Fiber-optic cables from the building to the local loop are economical from a cost perspective if the building is situated in a CBD market.

Broadband Office

Broadband Office, which was formed in 1999, is an independent entity funded with $100 million in venture capital money from Kleiner Perkins Caufield and Byers with eight office real estate companies—Crescent, Carr America, Duke-Weeks, EOP, Highwoods, The Hines Corp., Mack-Cali and Spieker—retaining small equity positions. Each office company owns less than 10% of Broadband Office. The original ownership percentage for each REIT involved was based on the amount of square feet they contributed. Each company's original ownership percentage was reduced when Microsoft and Sun Microsystems teamed up to buy a $50 million stake in Broadband Office. The office REITs contributed no initial capital but they allow telecom providers access to their buildings. Broadband Office, referred to as a BLEC, is the preferred provider for the buildings owned by these real estate companies. Broadband Office has formed multiple alliances with broadband service providers to wire office buildings and connect buildings to the backbone network of the Internet. Broadband Office also intends to launch complementary technology initiatives. Broadband Office's employee base could grow from 250 people to 1,000 people over the next nine months. An IPO could occur within a year or so.

Boston Properties

Boston Properties has actively worked to enter into arrangements with broadband providers to wire its buildings in terms of the "last few feet", or inside the buildings with the BLECs, and the "last mile", providing high-speed connection from the building to the Internet.

BLEC Arrangements

During 4Q 1999, Boston Properties Inc. announced that it had signed a revenue-sharing deal with Cypress Communications Inc., a BLEC telecommunications services provider. Under the non-exclusive agreement, Cypress will provide server-based voice, video and data transmission services to about 40 of Boston's office buildings. Boston Properties will share in 6% of the revenues that Cypress generates in their buildings and received 1.0 million warrants at an exercise price of $4.22 per share of Cypress' common stock, for a value of $11.8 million (as of May 12). The warrants are exercisable for periods of five to 10 years, but not until August 15, 2000. Boston Properties was one of three companies that agreed to make an equity investment in Cypress amounting to $1.2 million. Cypress' license agreements have a typical term of 5 years, with a 5 year extension.

Boston Properties also signed an access agreement with Allied Riser Communications to provide broadband data, video and voice communications services over fiber optic networks to 70 of its office buildings in Boston, Central New Jersey, New York City, San Francisco, and Washington, D.C. This agreement provides for Boston Properties to participate in the revenues that Allied Riser generates in its buildings, and Boston Properties received 404,438 warrants for shares of Allied Riser's common stock at an exercise price of $5.74 per share, plus the option to buy 262,000 additional shares.

Boston Properties' combined equity investment in Cypress and Allied Riser was reported to be approximately $6.5 million. Revenues received from these initiatives will be recorded as other income.

Arrangements to Connect to Backbone Network Via Wireless
During 1Q2000 Advanced Radio Telecom Corp. completed a master license agreement with Boston Properties to provide broadband wireless IP networks in 116 of the REIT's class A commercial office buildings. Other signed agreements include Teligent and Winstar.

Equity Office Properties

Equity Office has been extremely aggressive in signing telecom and technology-related agreements with various providers. Equity Office has emerged as the first mover in converging real estate and technology in a substantial way. On May 4, Equity Office named David Helfand the Executive Vice President of its New Business Development, including Equity Office Access, M&A activities and international endeavors. Equity Office Access encompasses all the ancillary services to tenants, including telecom initiatives and other e-business initiatives and investments, and is spearheaded by Michael Sheinkop, who is the Senior Vice President of Equity Office Access.

In 3Q 1999, Equity Office formed Equity Office Access as a separate e-business unit to invest in telecommunication services and other real estate related services for tenants. In 1999, the revenues generated from this unit approximated $8 million ($0.02-$0.03 per share), and in 2000, Equity Office Access could contribute $15-$20 million. Equity Office has worked to enter into arrangements with broadband providers to wire its buildings in terms of the "last few feet", or inside the buildings with BLECs, and the "last mile", providing high-speed connection from the building to the Internet.

Broadband Provider Arrangements
In 1Q 2000, EOP entered into an agreement with OnSite Access, a BLEC provider of broadband data, video and voice communications services focused on large and medium-sized office buildings. In exchange for access to Equity Office's buildings, OnSite Access (a private company) has granted Equity Office 2.3 million shares of warrants to acquire OnSite Access common shares for $2.36 per share. OnSite Access, which is a subsidiary of Frontline Capital, has filed a registration statement with the SEC to register its common shares for a public offering. OnSite Access has also agreed to pass-on 5% of the gross revenues generated by OnSite Access's fiber optic network services in Equity Office's properties, comprising 22 million square feet.

Equity Office has invested $2 million (624,393 shares) in Allied Riser for less than a 5% ownership interest. As part of the access arrangement, Equity Office received 1.4 million shares of vested warrants, translating into a stock market value of $31.4 million (as of May 12). The access agreement to install and operate Allied Riser's networks involves 170 buildings, representing 75.6 million square feet, in Boston, Philadelphia, Chicago, San Francisco and Washington, D.C. With the purchase of Cornerstone Properties' portfolio, Equity Office will assume the relationship that Allied Riser and Cornerstone agreed to, in which Allied Riser will install and operate its networks in 105 of

Cornerstone's buildings in Los Angeles, Oakland, Phoenix and San Francisco. Equity Office will assume warrants for 560,000 shares.

Another BLEC, Broadband Office (a private company), has a license arrangement with Equity Office involving 55 million square feet. The revenue-sharing arrangement amounts to 5% of the revenues generated in the buildings. Also, as part of the access agreement, Equity Office received 2.4 million common shares for an estimated value of $1.3 million. The term of the agreement extends for five years.

Equity Office also gave building access rights to place Winstar Communications' antennas on their buildings, representing roughly 63 million square feet.

As of March 31, 2000, Equity Office has 59% of its portfolio wired by at least one telecom provider, and by year-end 2000, all of the buildings are anticipated to be wired by two or more providers. In terms of the telecom, Equity Office Access has strategic relationships with OnSite Access, AlliedRiser Communications, Broadband Office and has national contracts to receive rental income with Winstar Communications and Level 3 Communications.

Arden Realty

During 4Q 1999, Arden signed an agreement with Eureka Broadband to provide its tenants with a range of business applications and faster Internet access. Arden is working with Eureka Broadband to raise the bar in setting tenant service standards. Eureka offers e-mail, Web hosting, Web design, high-speed access and video streaming in a user-friendly manner with technology staying apace of the change. The preferred agreement gives Arden an equity position of approximately 5% in Eureka and a revenue-sharing partnership. Management reported that Eureka, its preferred (yet not exclusive) provider, has already wired 55 of its buildings and that it expects to have 149 buildings wired by 4Q 2000. Under the terms of Arden's agreement with Eureka, Eureka cannot wire any other properties in the Southern California region until all the properties identified by Arden are complete. Although Eureka is Arden's preferred provider, other companies are not precluded from entering its buildings. Management noted that it has entertained relationships at its Howard Hughes site with Tenant Connect and PacBell.

Duke-Weeks Realty

On October 5, 1999, the Broadband Office consortium of real estate companies, including Duke-Weeks Realty, was formed. Duke-Weeks will benefit from a mutual ownership arrangement. Duke-Weeks currently owns 7.1% of Broadband Office, following the investment of Microsoft and Sun Microsystems. Duke will receive 5% of the gross revenues generated by Broadband Office in its buildings. Among the products Broadband Office will offer are local and long distance voice service, high-speed Internet, data and video connectivity, voice and e-mail, and Web hosting. Over time, these bundled services will be expanded to meet the changing telecommunication needs of tenants and to capture a greater proportion of telecommunication expenditures.

Management expects all its targeted properties to be wired by year-end 2000.

Prentiss Properties

During 4Q 1999, Prentiss announced that it partnered with Urban Media to provide broadband network infrastructure and online services to create e-business opportunities for office building tenants. The broadband capabilities provided by Urban Media enable companies to take advantage of hosted applications and advanced data services in an efficient and cost-effective manner. In addition to providing various amenities to its tenants, the terms of this partnership provide revenue sharing and ownership warrants to Prentiss. Prentiss does not plan to deploy a lot of capital in technology initiatives and prefers to maintain a low risk profile.

Mack-Cali Realty

On October 5, 1999, the Broadband Office consortium of real estate companies, including Mack-Cali, was formed. Mack-Cali will benefit from a mutual ownership arrangement, owning 7% of Broadband Office. Among the products Broadband Office will offer are local and long distance voice service, high-speed Internet, data and video connectivity, voice and e-mail, and Web hosting. Over time, these bundled services will be expanded to meet the changing telecommunication needs of tenants and to capture a greater proportion of telecommunication expenditures.

Liberty Property

In December 1999, Liberty announced that it has partnered with Urban Media, an onsite Internet Service Provider (ISP), to provide broadband network infrastructure plus online service options to its tenants. The broadband capabilities provided by Urban Media enable companies to take advantage of hosted applications and advanced data services in an efficient and cost-effective manner. Urban Media will also provide services tailored for growing companies, such as travel services and business supply services.

Urban Media is currently wiring 63 of Liberty's properties, with 15 million square feet, for high-speed broadband access. These properties are expected to be wired by year-end 2000. Tenant demand for this service appears very strong.

Reckson Associates

Reckson has worked to enter into arrangements with broadband providers to wire its buildings in terms of the "last few feet", or inside the buildings with BLECs, and the "last mile", providing high-speed connection from the building to the Internet. The company has signed revenue-sharing agreements with OnSite Access, a BLEC, and Winstar to provide wireless connectivity from the rooftop to the backbone network. With Reckson's relationship with Frontline Capital, Reckson enters into arrangements with Frontline's Partner Companies to better serve the Reckson tenants. The objective is to lever the value of real estate to create value-added services to the tenants.

Spieker Properties

On October 5, 1999, the Broadband Office consortium of real estate companies, including Spieker Properties, was formed. The collaborative effort in this arrangement is expected to be a positive. Spieker will receive 5% of the gross revenues generated by Broadband Office in its buildings. Management expects all its targeted properties to be wired by year-end 2000.

Arrangements To Connect To Backbone Network Via Wireless
Spieker also gave building access rights to place Winstar Communications' antennas on their buildings. In addition to Winstar, Spieker has given access rights to Advanced Radio Telecom and Teligent.

TrizecHahn

TrizecHahn has worked to enter into arrangements with broadband providers to wire its buildings in terms of the "last few feet", or inside the buildings with BLECs, and the "last mile", providing high-speed connection from the building to the Internet.

BLEC Arrangements

During 4Q 1999, TrizecHahn signed a revenue-sharing agreement with Cypress Communications Inc., a BLEC telecommunications services provider. Under the non-exclusive agreement, Cypress will provide server-based voice, video and data transmission services in TrizecHahn's office buildings, representing approximately 7 million square feet. TrizecHahn will share in 6% of the revenues that Cypress generates in their buildings and received 360,000 warrants at an exercise price of $4.22 per share of Cypress' common stock, for a value of $4.3 million (as of May 12, 2000). The warrants are exercisable for periods of five to 10 years, but not until August 15, 2000. Cypress' license agreements have a typical term of 5 years, with a 5 year extension.

TrizecHahn also signed an access agreement with Allied Riser who was given access to TrizecHahn's entire portfolio, with plans to install and operate its networks in 52 million square feet of TrizecHahn's buildings in the United States. TrizecHahn received 1.1 million warrants for common stock and has a 2% ownership position in the company. TrizecHahn will share in 5% of the revenues that Allied Riser generates in its buildings.

TrizecHahn has given access rights to Broadband Office to its buildings in the Mid-Atlantic and Southwest, comprising 22 million square feet. TrizecHahn has entered into a 5% revenue sharing arrangement with Broadband Office and received 716,000 common shares at no cost. TrizecHahn has signed an access agreement with OnSite Access for TrizecHahn's Northeast, Midwest and Los Angeles regions, representing 24 million square feet. TrizecHahn received 2 million warrants with an exercise price of $2.36 per share, translating into a 3% ownership position in OnSite Access. TrizecHahn will participate in 5% of the revenues generated. The goal is to offer more than one telecom provider in each building to better serve tenants. All of the arrangements have been non-exclusive.

Vornado

Vornado has worked to enter into arrangements with broadband providers to wire its buildings in terms of the "last few feet", or inside the buildings with BLECs, and the "last mile", providing high-speed connection from the building to the Internet.

BLEC Arrangements

During 4Q 1999, Vornado signed a revenue-sharing agreement with Cypress Communications Inc., a BLEC telecommunications services provider. Under the non-exclusive agreement, Cypress will provide server-based voice, video and data transmission services in Vornado's office buildings. Vornado will share in 3%-6% of the revenues that Cypress generates in their buildings and received 1.6 million warrants at an exercise price of $4.22 per share of Cypress' common stock, for a value of $18.9 million (as of May 12, 2000). The warrants are exercisable for periods of five to 10 years, but not until August 15, 2000. Vornado has made an equity investment in Cypress, amounting to less than a 3% ownership stake. Cypress' license agreements have a typical term of 5 years, with a 5 year extension.

Vornado also signed an access agreement with Allied Riser who plans to install and operate its networks in Vornado's buildings in New York City and Washington, D.C. Vornado retains less than a 3% equity interest in Allied Riser.

Summary

As evident, the relationships are multiplying, indicating the true convergence of technology with real estate, from our perspective. The office companies are rapidly forming alliances to wire buildings, and we anticipate that over the next 18 months a transformation will occur from Old Economy physical assets to wired buildings where information flow transforms business models to digital service industries built around serving customers. Many opportunities to capitalize on information and knowledge are expected to emerge. Project Constellation is at the cutting-edge of participating in the innovation and reshaping of the real estate industry.

> These are the new rules in the New Economy, according to John Tuccillo and James Sherry: "1. Your business is global whether or not you sell beyond the boundaries of your town. 2. Speed to market is everything. 3. You'll never walk alone. Business is done through strategic alliances. 4. Abandon your successes quickly."
>
> John Tuccillo and James Sherry
>
> "Click & Close: e-nabling The Real Estate Transaction", p. XV

Integrated e-Business Solutions

Many of the office companies are developing B2B and B2C e-business initiatives. According to Forrester Research, the B2B e-service market is expected to grow to $220 billion in 2003 from $3-$4 billion in 1999. Many of the office real estate companies are exploring various initiatives to better serve their tenants.

Captivate Network

One of the more noteworthy B2C initiatives involves Captivate Network and its alliance formed with many office real estate companies. Captivate's high-resolution flat-panel screens silently provide a wide variety of programming for elevator screens, featuring news, building-specific information, continuously updated stock quotes, live Internet content, advertising and traffic and weather reports. Captivate has relationships with several content providers including The New York Times, Reuters, The Boston Herald, SmarTraveler, Accuweather, and TrafficStation, and is continually adding content from new providers. The screens can also be programmed to display building-specific notices such as fire and life safety announcements and information on building amenities, and offer a unique advertising opportunity.

On April 19, Captivate announced partnerships to be the exclusive provider of e-programming to 500 high-rise office buildings, including Blackstone Real Estate Advisors, LP, Boston Properties, Cornerstone Properties, Crescent Real Estate Equities Company, Equity Office Properties Trust, Prime Group Realty Trust, Reckson Associates, Jack Resnick & Sons, Inc., Shorenstein Company, TrizecHahn Office Properties and Vornado Realty and the properties supervised by Wien & Malkin LLP. A total of $28 million has been invested in Captivate. With these contracts, Captivate estimates its market shares to be 50%-80% in certain cities.

Boston Properties
Early in 2Q 2000, Boston Properties announced it had signed an agreement allowing Captivate Network, a privately held company, to install flat-panel screens in 350-375 elevators in 33 of Boston Properties' Class A office buildings, predominantly located in Boston, New York City, Washington, D.C. and San Francisco. Boston Properties will receive 7% of advertising revenues and other potential revenue streams, plus the company has an equity interest in Captivate Network as part of the agreement.

Among the specifics of the agreement, Boston Properties invested $2.3 million in Captivate Network and received a combination of warrants and stock totaling approximately 1.13 million shares. Management expects the installation process to begin in 2Q 2000 and for buildings to "light" late this summer. The revenue kick-in date is 13 months after the signing of the individual building license agreements. Thus, a revenue contribution is not expected to occur until 2H 2001. The agreement projects $30,000 in total annual revenues per elevator car. With Boston's 7% share, the implied revenue figure approximates $2,100 multiplied by 350-375 elevators, translating into $750,000 in potential additional revenues.

Equity Office Properties
Equity Office arranged with Captivate Network to install Internet access in 254 elevators within 28 of Equity Office's office buildings, representing 14 million square feet, including Chicago Mercantile Exchange and 10 & 30 South Wacker buildings. Captivate's flat-panel, high-resolution screens installed in elevators are connected to the Internet, providing news, building information, weather, and stock quotes. In return for the access, Captivate, a private company, issued approximately 360,000 stock warrants to Equity Office for an estimated value (when vested) of $1.2 million. With the Cornerstone Properties transaction, Equity Office will assume warrants for 860,000 shares of Captivate. In April 2000, Equity Office structured a new arrangement with Captivate Network involving 60 million square feet of additional office space. In exchange for the access rights, Equity Office received 2.1 million common stock warrants. Equity Office also invested about $8 million for 1.9 million Series C and D preferred shares of Captivate. Both agreements extend for five years.

Frontline Capital

Frontline Capital is a real estate technology, with more of a bent to technology initiatives than owning the bricks and mortar. Frontline Capital could be a model for many other real estate companies. Frontline Capital, formed on July 15, 1997, is an independent entity, created from Reckson Associates. Frontline Capital is an agglomeration of New Economy B2B, e-commerce and e-services companies, referred to as Partner Companies, primarily small to medium-size enterprises. As of March 24, 2000, Frontline Capital had invested roughly $316.8 million in 13 Partner Companies and one internally developed company.

Frontline Capital's Spin-off from Reckson
Reckson Associates spun off Reckson Service Industries, renamed to Frontline Capital, in May 1998. For every 12.5 shares of Reckson Associates held, Reckson shareholders received 1 share of Frontline Capital plus 1 subscription right, entitling holder to the option to purchase 1 or 5 additional shares at $1.03 per share, expiring June 29, 1998. A total of 4.1 million shares were spun out and 20.6 million shares were issued with the rights offering, resulting in 24.7 million newly issued shares.

FrontLine Capital is in the process of looking for a COO.

Strategy
Frontline Capital has developed an e-cooperative platform that enables Partner Companies to tap the expertise of four broad areas: 1). The enterprise development group (eDG) offers strategic planning expertise. 2). The advisory board provides insight and access to new opportunities. 3). The network of Partner Companies cross-fertilizes knowledge and fosters collaboration. 4). Click and mortar works on virtual and physical workplace solutions. The Partner Companies may generally be characterized as offering Internet outsourcing solutions, e-commerce or infrastructure (deliver or enable delivery of goods and services over the Internet), and virtual bricks and mortar (combine virtual and physical infrastructure to deliver services). Frontline invests in companies where the Internet is expected to revolutionize the way the business is operated. In addition, the company, as part of Frontline, is able to tap the intellectual capital of the other Partner Company, resulting in many synergies and cross-collaboration of ideas focused on the office segment, specifically small and medium-size companies. We view this strategy as the business model for the New Economy. Frontline's Partner Companies are included in Table 7.

Table 7: **Frontline Capital's Partner Companies**

Partner Company	Invested Capital ($ Millions)	% Ownership	Profile
OnSite Access, Inc.	$46.0	22%	A BLEC providing integrated communications services
VANTAS Incorporated	211.5	76%	A virtual and physical office solutions provider
UpShot.com	16.0	18%	Web-based sales management solutions for SMEs
EmployeeMatters, Inc.	10.0	45%	A fully-integrated e-administration outsourcing company (employee benefit and human resources)
LiveCapital.com	7.5	4%	Marketplace through which SMEs may acquire financing
RealtyIQ.com	13.7	54%	Provider of e-commercial real estate information
CommerceInc Corp.	4.9	26%	e-infomediary focused on B2B e-commerce
AdOutlet.com	2.0	10%	Marketplace for advertising space across all media platforms
DigitalWork, Inc.	2.0	<1%	A B2B portal for SMEs providing information on multiple business tasks
NeoCarta Ventures	2.0	4%	A strategic investment into a venture capital fund
Opus360 Corporation	1.0	<1%	Marketplace for knowledge workers and project opportunities
GiftCertificates.com	0.2	<1%	A leading e-commerce provider of gift certificates
OneXstream, Inc.	na	80%	Business portal offering Frontline's e-services to SMEs

Source: Frontline Capital financials

Recent Announcements
In May 2000, Frontline Capital's VANTAS Incorporated plans to complete the merger with CarrAmerica's HQ Global for $1 billion, owning a 50% interest. VANTAS/HQ Global Workplace will service the executive suite industry, which offers furnished and staffed offices with the most advanced telecommunication and technology equipment.

Frontline Capital continues to acquire and develop Partner Companies that fit its strategy to service SMEs.

Equity Office Properties

Equity Office is involved in multiple e-business initiatives, not to mention its involvement in Project Constellation. In 3Q 1999, Equity Office formed Equity Office Access as a separate e-business unit to invest in telecommunication services and other real estate related services for tenants. Equity Office Access encompasses all the ancillary services to tenants and is spearheaded by Michael Sheinkop. e-business initiatives and services include office suites, ATMs, training tools, and informational and advertising services. Service companies include Captivate Network (please see page 94), U.S. Bancorp (USB), Wyncom Inc. and Books are Fun.

In 1999, Equity Office Access entered into a joint venture arrangement with Regus Business Centers Corp of England, a provider of full service furnished office suites. The joint venture will lease office space from Equity Office to operate business centers.

In 1999, the revenues generated from this unit approximated $8 million ($0.02-$0.03 per share), and in 2000, Equity Office Access could contribute $15-$20 million.

Arden Realty

Arden is another office real estate company exploring various technology opportunities. As tenants are focused on operating expenses, the landlords may lower costs by providing an array of telecom services and connectivity services in a bundled package. Arden is working on services that will lower operating costs and increase rental rates. Arden views the opportunity as getting tenants to use services and pay rent online, use concierge service and interact online. Utilization of technology is key.

On May 25, Arden expects to launch its new Web site www.ardenrealty.com. Among the new features that this Web site will offer are a virtual concierge ("Arden at Your Service"), a tenant service link preferred provider program, a property showcase of the company's portfolio, an industry events master calendar, and a space-plan aid. The space-plan aid will enable tenants to make space plan changes prior to renewal, which could improve cycle times and efficiencies associated with leasing transactions.

High Absorption Rates In High-Tech Corridors

Similar to the growth in demand for fulfillment centers and carrier hotels is the breakneck speed at which these Internet companies are growing and demanding flexible space. Open ceilings, honest architecture, intuitive and collaborative space requirements are often requirements of these New Economy businesses.

Arden Realty

In terms of leasing to dot.coms, Dan Bothe at Arden has been taking an in-depth look at the business strategy and financial position of all potential high-tech tenants. Management thinks that Arden has been very cautious in dealing with these start-ups, as only 8% of its portfolio is leased to high-tech companies, of which only 1.5% is leased to dot.coms. One of the reasons for this small percentage is that Arden's average lease size is approximately 5,000 square feet, which is less than what a rapidly growing company requires. For all these dot.com or high-tech tenants, Arden has letters of credit that would cover all out of pocket expenses including tenant improvements and leasing commissions, plus some of the downtime. Management noted that it does not plan to take any form of equity (options or warrants) in exchange for rent or a security deposit.

Spieker Properties

Despite its strong presence in San Francisco, San Jose and Seattle, only 3-4% of Spieker's NOI is derived from pure play Internet tenants, with less than half of that stemming from B2C companies. Transactions are being structured with substantial letters of credit, cash, or combinations of the two. Management stays in very close contact with the VC community to scrutinize dot.com companies' prospects. Often, Spieker declines to lease space to these more speculative tenants. Extremely strong demand within the company's markets gives it the flexibility to wait for the best deals and the highest-quality tenants.

Table 8. **Top 10 U.S. Technology Cities**

	Location	Technology Enterprises
1	San Jose	Intel, Yahoo!, Cisco, Hewlett-Packard and VCs
2	Dallas	GTE, EDS and many foreign telecom players
3	Los Angeles	Disney's Internet investments
4	Boston	Wellfleet, Digital Equipment and Lycos
5	Seattle	Microsoft, Amazon.com and RealNetworks
6	Washington, D.C.	America Online
7	Albuquerque	Intel Manufacturing
8	Chicago	Motorola and Arthur Andersen
9	New York	IBM and AT&T
10	Atlanta	ISP MindSpring.com and many start-ups

Source: ZDNN

The high-tech corridors are witnessing very intense demand for office space. Table 8 indicates the top high-tech cities, and real estate fundamentals point to very strong rental rate growth in these locations. Deutsche Banc Alex. Brown's real estate economist, Peter Muoio, states that "the nearly 150,000 new media jobs in Silicon Alley represent a sector that is now one-half the size of the city's well-established banking and securities industry. Taking up space in Midtown South, Soho, and "obsolete" financial district buildings, the dot.coms have also served to fill gaps in a New York City market that had already seen prime Midtown space fully absorbed. One report shows dot.com companies accounting for 25% of all the leases executed in Manhattan in 1Q 2000, eclipsing for the first time the traditional mainstays of banking and finance." (*Real Estate in the New Economy, April 26, 2000, p. 6*) Though the re-leasing spreads are extremely wide, we realize the pace is unsustainable, and some shakeout in speculative start-up enterprises is expected. Thus, caution is necessary in the underwriting standards that each office real estate company employs. **From a demand perspective, we believe that the central business districts are attractive locations for high-growth companies and companies embracing the New Economy as high-speed access provided by broadband service providers has infiltrated the densely urban markets. Wired office buildings are the mantra, as telecom and technology agreements are signed, giving broadband service providers access to buildings.**

Summary

Considering that the office real estate companies led the industry in embracing technology and the move to digitalized information, some of the specific financial arrangements with the telecom service providers and broadband service providers are being disclosed. The primary focus for many management teams is determining the best broadband network solution to deploy, and the emergence of the BLECs has helped to simplify this answer. By allowing access to multiple providers, the tenant's interests are better served and bundled packages of DSL, wireless and fiber are present in multi-story buildings. As more of the properties are wired, a gradual shift is occurring toward B2B and B2C initiatives. The most notable alliance is Captivate Networks, to install flat-panel screens in elevators providing online news, stock quotes, weather updates and other information. We believe other services will be offered to tenants, as office companies work toward learning their tenant base and what value-added services would strengthen loyalty to the buildings. Finally, the high-tech corridors, such as San Jose and New York, that have sprung into existence in the United States, are leading to intense demand for office space in these major CBD markets. We believe that the demand for CBD space looks promising, considering these properties are located in close proximity to the installed fiber loops, making high-speed broadband access a more realistic and less costly proposition than in more remote locations. We believe that the CBD markets should continue to prosper. Even though some start-ups may have financial troubles, all industries are moving into the Knowledge Age, requiring a change in business models, and new enterprises are emerging to capture a piece of the profit potential. In our view, strict underwriting standards should be a given for all enterprises without track records, and office real estate companies should work to build upon their knowledge base of their existing tenant base. With wired office buildings, e-business initiatives may be developed or acquired to add value to the physical assets, increasing the value in services, tenant loyalty programs and relationships.

Table 9: Real Estate and Technology Alliances

Real Estate Company	Broadband Solution Providers and/or e-Business Initiatives
Industrial	
AMB Property	Brandfarm.com, PhatPipe.com, Redenvelope.com, Webvan, Project Constellation
First Industrial	Teligent, Newton Tech
ProLogis	INSIGHT, Customer Connect[SM], Amazon.com, Streamline.com
Office	
Arden Realty	Eureka Broadband, Realconnect.net, PhatPipe
Boston Properties	Cypress Communications, Advanced Radio Telecom, Allied Riser, Teligent, Winstar, Captivate Network
CarrAmerica Corporation	Broadband Office, Teligent
Cornerstone Properties	Cypress Communications, Captivate Network
Crescent Real Estate	Broadband Office
Duke-Weeks Realty	Broadband Office
Equity Office Properties	Equity Office Access (Allied Riser, Broadband Office, Captivate Network, Regus Business Centers, Wyncom Inc., U.S. Bancorp, Books are Fun), OnSite Access, Winstar Communications, Project Constellation
Highwoods Properties	Broadband Office
Liberty Property	Critical Path, Urban Media, OnSite Access
Mack-Cali Realty	Broadband Office
Prentiss Properties	Critical Path, Urban Media, OnSite Access
Reckson Associates	Frontline Capital Group, OnSite Access, Winstar Communications, Captivate Network
Spieker Properties	Advanced Radio Telecom, Teligent, Winstar Communications, Broadband Office, Project Constellation
TrizecHahn	Allied Riser, Cypress Communications, Captivate Network, Global Switch
Vornado Realty	Allied Riser, Cypress Communications, Captivate Network
Multifamily	
Archstone Communities	BroadbandNOW, SafeRent
AIMCO	Buyersaccess.com
AvalonBay Communities	Javalon/Trillium
BRE Properties	VelocityHSI (co-engineered with Cisco Systems, Tut Systems, and AT&T), ZippityKlik, KlikLANE, Coolcast, CorrigoNet, MaketheMove.com
Equity Residential	WIZ, Project Constellation
Post Properties	Javalon/Trillium, Darwin Networks, InterQuest, AT&T, Cisco Systems, Tut
United Dominion	Javalon/Trillium
Regional Malls	
Glimcher Realty	iPorts via Omnitech Corporate Solutions
Simon Property	Simon.com, Tenantconnect.net, Clixnmortar.com, Project Constellation, Merchant Wired
Taubman Centers	Fashionmall.com, Centerlinq kiosks, Merchant Wired
The Rouse Company	Merchant Wired
The Macerich Company	Merchant Wired
Westfield America	Merchant Wired
General Growth Properties	Mallibu.com, Cisco Systems
Strip Shopping Centers	
Developers Diversified	Tower Resource Management
Kimco Realty	Eversave.com

Source: Company data and Deutsche Banc Alex. Brown estimates

The Financial Impact Puzzle: Spin Off Or Retain?

We believe that the alliances being formed with broadband service providers and the e-business initiatives blanketing the REIT industry are testimony to the fact that the convergence between real estate and technology is occurring. As a corollary to the convergence and the potential outcomes stands the financial impact. Many of the initiatives are in the formative phases, so details regarding the financial arrangements are beginning to be disclosed. Similar to all start-up enterprises, arrangements and initiatives without track records, visibility in the financial projections is low. From our analysis of the announcements articulated thus far, we conclude that the most divergence occurs between the options of spinning off the technology initiative to unlock value and reward shareholders and the other of retaining the potential upside. In our opinion, both solutions can prove to be profitable for shareholders.

Spinning Off Technology Entities To Reward Shareholders

The real estate company that set the spin-off option in motion was Reckson Associates with the spin-off of FrontLine Capital in May 1998. Prior to the tech bubble bursting over the past several months, FrontLine Capital had posted a stellar record in terms of stock performance, hitting a high of $68 in December 1999, despite a drop to $18 and change as of May 9, 2000.

A similar avenue is being pursued by BRE Properties and its planned spin-off of VelocityHSI, which is expected to occur in 2Q 2000. The rationale behind BRE's decision was to unlock the value of Velocity for shareholders. VelocityHSI is a high-growth entity whose potential will not be hampered under the REIT umbrella. Capital needs may be funded via venture capital firms and other sources. In fact, BRE has stated that its strategy is to develop real estate technology initiatives and spin off the enterprises to shareholders, to provide shareholders with potential capital appreciation and higher valuations, mirroring a high-growth company, for those investors that retain the spun-off entity. As an independent real estate technology enterprise VelocityHSI may more easily obtain capital via venture capital funds, IPOs and other means to grow the start-up into a more established company. In addition, the high risk profile of the enterprise is separated from the REIT in order to preserve the stable cash flow and defensive nature of a REIT investment.

Considering the recent tumble that FrontLine Capital has witnessed, the market timing to execute a spin-off must be right. We concur that independent real estate technology start-ups may have more access to capital to grow than the limitations placed on REITs and the inability of many REITs to tap the equity markets for funds. Though a spin-off may unlock value for shareholders and give the independent real estate technology start-up a higher multiple, we believe that the spin-off must be in the long-term best interests of shareholders.

Retaining Technology Entities to Provide Integrated Solutions to Tenants

Another option is to retain the technology initiative that could enhance NOI. For shareholders of REITs, value is being created not only in revenue-sharing arrangements, which benefit REITs' cash flow and are particularly prevalent in the office sector, but also direct equity investments in broadband network providers, e-tailers and virtual malls. We would emphasize that the importance of equity investments is not so much the monetary value to be potentially realized as the valuable insight into a technology that the real estate management team receives. For instance, Taubman's investment in fashionmall.com has given Bobby Taubman an insight into executing a successful e-tailing model, converging the relationships between a physical and virtual landlord. Though fashionmall.com is trading below its IPO price, the intangible value in the knowledge gained and the strategic relationships formed via the involvement in the e-tailer is not factored into any net asset value calculations.

We do not propose to quantify the intangible value, but suggest that many of the equity investments are windows into the technology world, assisting many REIT management teams in re-tooling their business models. The importance of this knowledge, such as AMB's investments in Webvan.com, brandfarm.com and redenvelope.com, may be instrumental in transforming this industrial REIT into a future real estate technology company focused on fulfillment assets and systems.

The most prevalent initiatives that are being retained are the broadband service agreements with the various BLEC and telecom service providers. Broadband Office, VelocityHSI and Merchant Wired also validate the trend to enter into revenue-sharing arrangements and invest small equity positions in broadband network providers. Although some REITs are evaluating the option to use capital to deploy and own the Internet/broadband infrastructure in the buildings, the cash flow hit could be a short-term negative but there exists the potential for some obsolescence risk associated with the deployed technology. We would caution any REITs that opt for owning the access, as the challenges of staying apace with technological advances.

Nonetheless, installing a broadband platform is resulting in many revenue-enhancing arrangements, whereby the service fees collected from the tenants are increasing. Over time, as additional e-business initiatives are launched, we anticipate that the rent payment for space may diminish, as other service fees related to technology and better serving the tenant become increasingly important.

Value-added services that build tenant relationships are expected to be more commonplace. As information flow increases and businesses move into the New Economy wired for high-speed broadband access, enabling more information-sharing and enhanced knowledge about customers, products and tangible assets could represent a smaller portion of the total value in what is delivered to a customer. This profound transformation in the economy could have repercussions on those real estate companies that choose to sit idly at the Internet speedway, allowing technology to alter the world, leaving the management team in an indefinite state of catch-up.

Other e-business initiatives that have been launched, both B2B and B2C, are being retained at present. Simon's Clixnmortar.com and AIMCO's Buyersaccess.com are uniquely positioning these real estate companies, perhaps giving them a competitive advantage at some future point. However, each management team must evaluate the relative merits in retaining the initiative to firmly position the company as a leader in the industry and in spinning off the enterprise if the value-added to the sector could substantially reward existing shareholders of Simon and AIMCO.

In our view, the decision to retain or spin should be seen as a long-term strategic move, considering the real estate company is opting either to transform its business model to resemble a real estate technology company or to shed the technology and preserve the REIT profile. For this reason, we view the industry in a transitory phase where radical changes are expected to occur. The REITs that spin off their technology initiative and remain rooted in their REIT status will be bond-like investments for their attractive dividends. Some may opt to go private. We believe that the capital markets could remain unyielding to additional stock offerings, and self-funding strategies may be the name of the game.

In contrast, the leaders that are reshaping their companies to become real estate technology companies could realize the most significant gains in stock prices and the best investments for shareholders who are seeking capital appreciation. **Those companies that could be gradually re-tooling their business models in that direction include: AMB Property, Apartment Investment and Management Company, Archstone Communities, AvalonBay Communities, BRE Properties, Equity Residential, Equity Office Properties, Kimco Realty, The Macerich Company, ProLogis, Reckson Associates, The Rouse Company, Simon Property Group, Spieker Properties, Taubman Centers, TrizecHahn, United Dominion, and Westfield America.**

We believe that both investments have an element of risk. The REITs that remain REITs have execution risk, as some of these management teams have not proven the ability to self-fund through a downturn in the economic cycle. The REITs that morph into real estate technology companies have technology risk in that the selected initiatives being pursued may fail. Net and net, investors in real estate companies should be very selective in investing in these companies, depending on their return/risk parameters. In our view, staying abreast of these changes is critical as the real estate industry is moving rapidly into the New Economy.

Summary

We foresee many REIT business models changing as management teams embrace technology and services and e-business initiatives become a more substantial contributor to the bottom line. Some de-REITing may occur and we anticipate some REITs transforming their strategies into real estate technology companies, assuming more risk, but offering more upside potential. Clearly, the Knowledge Age is moving all industries into digital applications, e-marketplaces, virtual private networks, and collaborative work environments, changing Old Economy business models into wired industries where knowledge workers are critical to the survival of the company. As the convergence of real estate and technology unfolds, we anticipate the REIT industry that is currently in transition will be radically transformed. Many

REIT management teams today will embrace the broadband revolution and grow value-added services, strategic partnerships, brands and other intangible assets. Similarly, the technology start-ups that number about 200 are expected to consolidate and merge, building brand loyalty and establishing a market presence to integrate the technology aspect with physical assets, becoming real estate technology companies.

Although the broadband revolution is moving information and industries at warp speeds, it is difficult to predict the future profile of the real estate industry. Reckson Associates' spin off of Frontline Capital and BRE Properties' planned spin-off of VelocityHSI are moves to unlock value for shareholders and to form an independent company that may have access to capital more readily than a REIT.

Despite the volatility in the stock market for more speculative investments, the viable companies that develop a track record, show growing profitability, and become leaders in their respective niche markets, are expected to show higher stock prices over the intermediate and long-term. A spin-off of a faster-growing company than the parent should translate into a higher stock valuation being awarded to the spun off company, which unlocks value for shareholders and considered a positive, in our opinion. Based upon our analysis and research, we believe companies incorporating technology and digital information into their business plans will help move the industry into the New Economy. Project Constellation was a defining moment in the real estate industry, in our opinion, as some of the leaders are collaborating with their skills and commitment to transform the industry, and the leaders of tomorrow could have fundamentally different profiles from their existing portfolios of tangible assets. We believe that no matter whether the initiative is spun out to shareholders or retained within the company, the winners over the long term will be those companies that realize the importance of using technology to enhance the value of their real estate platform.

Risks

Telecom Regulatory/Legislative Risk
At the Real Estate Conference Group meeting, attorneys Pamela Westhoff, partner of O'Melveny & Myers, and Peter Weil, partner of Christensen, Miller, Fink, Jacobs, Glaser, Weil & Shapiro, LLP, presented to real estate companies. They suggested the companies should slow down and think about the potential problems and how to handle them. These two attorneys provided their perspective on the areas that require the closest analysis.

1. **Leases with Dot.com Companies**—Minimize risk and maximize opportunity with proper due diligence. Look closely at the following: cancellation rights if tenant can't expand and other termination rights, 24-hour service requirements as a worldwide sales operation, special needs in terms of electrical/telecom systems and power equipment, warrants if no cash or credit, security deposits or guarantees from creditworthy establishments, events of default, copy of business plan, who investors are, and, is it adequately funded?
2. **Development Opportunities**—This is the intersection between real estate and technology. The attorneys suggest looking closely at the documents. Real estate owners should work to preserve maximum flexibility without limiting scope in terms of enabling Internet companies to sell services. Global positioning systems are valuable.
3. **Telecom/Media Issues**—Forced Access Legislation with BLECs, rooftops, ISPs, federal and state laws allow telecom service providers access in return for compensation. Mrs. Westhoff stated that the mantra is bandwidth, location, bandwidth, so do not discriminate, no exclusives, look at indemnifications and serve the customer.

In structuring warrants, Mrs. Westholf provided cautionary remarks on several fronts: warrants are difficult to determine as they enable the owner of the warrant to buy a certain amount of stock at a specific price, posing questions such as how many warrants?, what is stock value? and what is the number of shares worth? Other questions include when warrants are exercisable, in stages? Are there transfer restrictions? Any registration rights? Make sure real estate owners are treated fairly. If successful, the owner of property should receive something of value. REITs should be careful in accepting warrants that are issued because they may impact the financing of a building.

In leasing to dot.com companies, the security deposits should be for an entire year, not a couple of months. The deposit should include tenant improvements and real estate commissions. If the start-ups' access to capital is limited, determine what assets can be recovered. Letters of credit generally fare the best in bankruptcy as they are secured by payment of rent. Some protection could be structured in the arrangements, so far as the start-up maintains a specific network. The key is to reduce the credit risk for the real estate company.

Please refer to the preceding section, *The Financial Impact Puzzle: Spin Off or Retain?*, on p. 96 to 99 for a detailed discussion on the risks associated with real estate companies treading into the New Economy, what it means for those that lag and those that adopt technology and other e-business initiatives.

Concluding Remarks

We firmly believe a convergence is occurring and REITs, which are considered the B&M companies of the Old Economy, are embracing the New Economy, transforming themselves into real estate technology companies. As indicated throughout this report, we believe that the e-world involves building smart communities, or gathering places, whether apartments, industrial facilities, offices buildings, or retail centers. The real estate owners that have the most to gain are those that use technology to learn who goes in and out of their buildings. Knowing the tenants and customers enables a building owner to offer services that are value-additive, thus building loyalty and a brand. In our opinion, intellectual capital could become the most valuable form of capital in the future, with tangible assets representing a smaller and smaller portion of the total value of a company. **Building relationships through knowledge is the future. And our visions of these futuristic buildings are those multifamily units, office properties, retail centers and industrial facilities that become educated in knowing their tenants and/or customers, creating intangible value, a new asset for the real estate world.**

> If, in fact, real estate is beginning to experience a major market shift (and certainly many of us can attest to the signs), then you in the industry must prepare to be in the knowledge business. This knowledge-based business is a new model for many industries...The platform for building new and sustainable value is not just technology and not just data and information; it's the combination of these *plus* the application of industry experience to create success."
>
> John Tuccillo and James Sherry
>
> "Click & Close: e-nabling The Real Estate Transaction", Chapter 5 p. 61, *Thriving with Technology*

Based upon our analysis, wiring buildings is the first step in moving to the Knowledge Age because it is acknowledging that tenants and customers need to be empowered and given access to information available via the Internet. Real estate owners also need to build customer profile databases to know their tenants and customers. As Bill Gates states in *Business @ The Speed Of Thought*, "The most meaningful way to differentiate your company from your competition is to do an outstanding job with information. *How you gather, manage, and use information will determine whether you win or lose.*" We concur with this statement and believe that real estate companies have the opportunity, via the REIT Modernization Act, to create value-added services and intangible assets, strengthening the value of their physical assets, producing higher stock prices and higher net asset values.

We believe that real estate is a platform from which Internet applications and e-services may be launched to better serve tenants and also to reward shareholders. In our opinion, the REIT management teams that are focused on wiring their buildings, launching e-business initiatives and re-tooling their business models are showing that they are adding value. We consider properties to be the ultimate portals, and the embedded value in real estate is just beginning to be tapped. In our opinion, the leaders that are reshaping their companies to become real estate technology companies could realize the most significant gains in stock prices and the best investments for shareholders who are seeking capital appreciation. **Those companies that could be gradually re-tooling their business models in that direction include: AMB Property, Apartment Investment and Management Company, Archstone Communities, AvalonBay Communities, BRE Properties, Equity Residential, Equity Office Properties, Kimco Realty, The Macerich Company, ProLogis, Reckson Associates, The Rouse Company, Simon Property Group, Spieker Properties, Taubman Centers, TrizecHahn, United Dominion, and Westfield America.**

We believe a core list of Real Estate Technology companies will emerge for shareholders to own. The real estate leaders are beginning to emerge, and we recommend swapping out of those companies that lag the industry as the pace of technological change is so rapid. We believe that there is an opportunity costs in not integrating technology into a company's business plan. In our view, staying abreast of these changes is critical as the real estate industry is moving rapidly into the New Economy. Stock selectivity will become increasingly important. Analysts/investors must understand thoroughly the strategies and goals of each CEO and company, in order to distinguish between the real estate companies moving more to real estate technology companies, with the potential of capital appreciation, and those that remain tried and true to real estate, with the value as an income-oriented investment with dividend growth. The real estate industry is in a state of flux and investors need to be attuned to the transition in order to adhere to or adjust their investment risk and return objectives and to own the appropriate stocks. We believe the transformation is underway.